a1 the add-on of the self-adhesive composition to the backing material being at least 3 g/m^2 and

a2 the surface coverage of the backing material being at least 1%,

b) permanent deformation of at least some of the domes, polygeometric structural forms or at least some of each.

Claim 2 (amended). Process according to Claim 1, wherein at least 10% of the domes, polygeometric structural forms or of both of them are permanently deformed.

Claim 3 (amended). Process according to Claim 1, wherein at least some of the domes or polygeometric structural forms or of both are permanently deformed to an extent such that a closed surface is formed or the domes or polygeometric structural forms or both are connected to one another or to each other at least partially by means of lines.

Claim ~~4~~ (amended). Process according to Claim 1, wherein permanent deformation of the domes or polygeometric structural forms takes place by means of a controlled temperature regime during coating or by the introduction of radiative energy, mechanical energy, secondary energy or by a combination thereof.

Claim 5 (amended). Process according to Claim 1, wherein the self-adhesive composition is applied to the first backing material by halftone printing, thermal screen printing or gravure printing or by the nozzle process.

Claim 6 (amended). Process according to Claim 1, wherein the add-on of

the self-adhesive composition to the first backing material is greater than 6 g/m^2.

Claim 7 (amended). Process according to Claim 1, wherein the first backing material is a roller (6) or a belt with an abhesive surface, the abhesive surface comprising a coating of silicones or fluorine compounds or a plasma-coated release system, which is applied with a weight per unit area of from 0.001 g/m^2 to 3000 g/m^2.

Claim 8 (amended). Apparatus as recited in Claim 7, wherein the abhesive properties of the surface of the roller 6 are matched so that the applied self-adhesive composition adheres to the thermally conditioned roller.

Claim 9 (amended). Process according to Claim 1, wherein the domes and/or polygeometric structural forms are transferred to a second backing material during or after the permanent deformation.

Claim 10 (amended). Process according to Claim 7, wherein the domes polygeometric structure forms or both are transferred to a second backing material during or after the permanent deformation, the second backing material is guided against the roller (6) or the belt by way of a pickup roller (7) which is positionable in the peripheral direction and/or radial direction with respect to the abhesive roller or to the abhesive belt and/or may be applied with a pressing force, so that the degree of permanent deformation may be influenced.

Claim 11 (amended). Process according to Claim 9, wherein the transfer of the self-adhesive composition takes place by means of a pair of deflection devices

(8, 9) which is arranged at different positions along the periphery of the abhesive roller (6) or of the belt, the second backing material being guided a distance along the surface of the abhesive roller (6) or the belt.

Claim 12 (amended). Process according to Claim 11, wherein the deflection devices (8, 9) comprise rollers which are positionable in the peripheral direction, radial direction or both with respect to the abhesive belt and which optionally are applied with a pressing force so that the degree of permanent deformation is optionally influenced.

Claim 13 (amended). Process according to Claim 1, wherein the first backing material has a surface which has a random or regular three-dimensional geometric structure.

Claim 14 (amended). Process according to Claim 1, wherein the self-adhesive composition is a hotmelt adhesive composition.

Claim 15 (amended). Process according to Claim 1, wherein the profile of viscoelastic properties of the domes, polygeometric structural forms or of both is established by controlling the heat energy from the coating process, by the at least partial introduction of additional energy, or by the at least partial removal of heat energy, or by a combination thereof.

Claim 16 (amended). Process according to Claim 1, wherein the domes, polygeometric structural forms or both applied to the backing material have a plasticity-elasticity ratio at the time of deformation, at a frequency of 100 rad/s, of

greater than 0.3 to 50.

Claim 17 (amended). Process according to Claim 14, wherein the hotmelt adhesive composition is in foamed form, and is optionally crosslinked by means of electron beams, UV or both.

Claim 18 (amended). Process according to Claim 1, wherein the backing material has a bond strength on steel to the reverse face of the backing of at least 0.5 N/cm.

Claim 19 (amended). Plasters, medical fixings, wound coverings, doped systems, and orthopaedical and phlebological bandages and dressings comprising partially self-adhesively treated backing materials prepared according to Claim 1.

Claim 20 (amended). Plasters, medical fixings, wound coverings, doped systems and orthopaedical and phlebological bandages and dressings according to Claim 19, wherein following its production, the partially self-adhesively treated backing material is lined or provided with a wound pad or padding and/or is sterilized.

Claim 21 (amended). Industrial and reversible fixings comprising the partially self-adhesively treated backings prepared according to Claim 1, which on removal cause no damage or injury to substrates of paper, plastics, glass, textiles, wood, metals or minerals.

Claim 22 (amended). A method for forming technically permanent bonds